

61.(NEW) The method of claim 60, wherein said cells are genetically modified to express and extracellularly present or secrete said extracellular matrix degrading enzyme.

62.(NEW) The method of claim 60, wherein said extracellular matrix degrading enzyme is a purified, natural or recombinant extracellular matrix degrading enzyme externally added to said cells.

63.(NEW) The method of claim 60, wherein said cells are selected from the group consisting of marrow hematopoietic or stromal stem cells, keratinocytes, fibroblasts, blastocysts, neuroblasts and astrocytes.

64.(NEW) The method of claim 60, wherein the tissue is selected from the group consisting of bone, muscle, skin and nerve.

65.(NEW) The method of claim 60, wherein said extracellular matrix degrading enzyme is selected from the group consisting of a collagenase, a glycosaminoglycans degrading enzyme and an elastase.

66.(NEW) The method of claim 65, wherein said glycosaminoglycans degrading enzyme is selected from the group consisting of a heparanase, a connective tissue activating peptide, a heparinase, a glucuronidase, a heparitinase, a hyaluronidase, a sulfatase and a chondroitinase.

67.(NEW) An *in vivo* method of implanting a tissue or a portion thereof, the method comprising the steps of:

- (a) externally adhering to the tissue or the portion thereof a purified, natural or recombinant, extracellular matrix degrading enzyme;
- (b) implanting said tissue or the portion thereof *in vivo*.

68.(NEW) The method of claim 67, wherein the tissue or the portion thereof is selected from the group consisting of embryo, skin flaps and bone scraps.

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69.(NEW) The method of claim 67, wherein said extracellular matrix degrading enzyme is selected from the group consisting of a collagenase, a glycosaminoglycans degrading enzyme and an elastase.

70.(NEW) The method of claim 69, wherein said glycosaminoglycans degrading enzyme is selected from the group consisting of a heparanase, a connective tissue activating peptide, a heparinase, a glucuronidase, a heparitinase, a hyluronidase, a sulfatase and a chondroitinase.

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